

Exhibit 2

Exhibit for US Patent No. 7,238,550 Against Accused Semiconductor Components Industries, LLC, Products


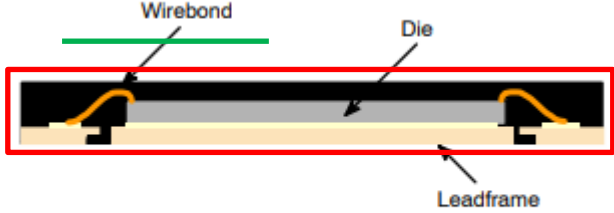
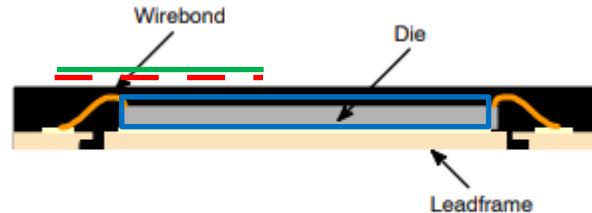
Claim	Marubeni COB package (chip on board logic module)
<p>17[P]. A method of fabricating Chip-on-Board logic modules using selectively settable materials, said method comprising:</p>	<p>Evidence: The OnSemi QFN package (chip on board logic module) gets fabricated using Epc</p>  <p>Board Level Application Notes for DFN and QFN Packages</p> <p>AND8211/D</p> <p>INTRODUCTION</p> <p>Various onsemi components are packaged in an advanced Dual or Quad Flat-Pack No-Lead package (DFN/QFN). The DFN/QFN platform represents the latest in surface mount packaging technology. It is important to follow the suggested board mounting guidelines outlined in this document. These guidelines include printed circuit board mounting pads, solder mask and stencil pattern and assembly process parameters.</p> <p>https://www.onsemi.com/pub/Collateral/AND8211-D.PDF</p>

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	 <p data-bbox="625 516 1096 571">Figure 3. Cross-Section of a Single-Chip DFN Package</p> <p data-bbox="520 621 1348 654">https://www.onsemi.com/pub/Collateral/AND8211-D.PDF</p>
<p data-bbox="201 686 499 881">[17A]. mounting unpackaged die on a circuit board using a first layer of selectively-settable material;</p>	<p data-bbox="520 686 1894 816">Evidence: The OnSemi QFN discloses a silicon die attached to PCB mounting pads, using thermally conductive adhesive (not visible in the figure). Further, the evidence discloses that thermally conductive adhesives are the epoxy resins which are very stable fluids (i.e. only partially, never fully hardened), hence only some portion of the epoxy resins gets hardened.</p>  <p data-bbox="625 1122 1096 1177">Figure 3. Cross-Section of a Single-Chip DFN Package</p> <p data-bbox="520 1227 1348 1260">https://www.onsemi.com/pub/Collateral/AND8211-D.PDF</p>

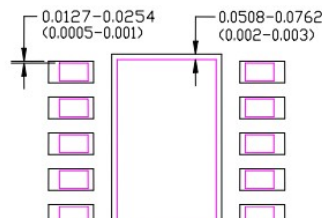
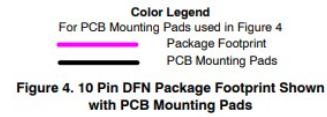


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Used Semiconductor Components Industries, LLC, Products



Claim	marubeni COB package (chip on board logic module)
	<p>https://www.onsemi.com/pub/Collateral/AND8211-D.PDF</p> <p>https://en.wikipedia.org/wiki/Flat_no-leads_package</p>

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	<p data-bbox="525 365 1528 397">https://www.panacol.com/adhesive-glue/thermally-conductive-glue#</p> <p data-bbox="525 706 1770 771">https://industrial.sherwin-williams.com/emeai/gb/en/resin-flooring/resources/flooring-technical-resources/technical-articles/epoxy-hardeners-use.html</p>
<p data-bbox="203 846 497 1349">[17B]. hardening a portion of said first layer of selectively-settable material such that said unpackaged die is secured to said circuit board, but some of said selectively-settable material between said unpackaged die and said circuit board is never fully hardened.</p>	<p data-bbox="525 846 1860 1040">Evidence: Evidences disclose that thermally conductive adhesives are the synthetic epoxy resins which are very stable fluids (i.e., never fully hardened). Therefore, some portion of epoxy resins can be fluidic. However, since the die has to get attached to the circuit board, therefore some of the epoxy resin has to get hardened by addition of epoxy hardener. The amount of fluidic and hardened portions of epoxy resins can be controlled by varying the amount of epoxy hardener added.</p> <p data-bbox="525 1081 1860 1211">Further, some evidence found suggests that the liquid/fluidic epoxy resin might be a better thermal conductor than solid epoxy resin. Therefore it is highly likely that some form of epoxy resin must be liquid for thermal conduction, while other form must be solid for attaching the die.</p> <p data-bbox="569 1312 1755 1578">Figure 10 shows that the phase transition temperature can be modulated by using different DGP30n ratios, and it is shown that the liquid crystal form appeared in a very wide temperature range in the second system. Therefore, in systems suitable for maintaining the liquid phase during heat curing, the wide temperature range of liquid crystal is important for finding the optimal curing conditions, selecting the optimal curing agent, and investigating the curing temperature [32]. Figure 11 shows the thermal conductivity of DGEBA, crystalline epoxy resin, and System 2 that DGP304 and DGP308 is mixed in 1:1 mol ratio. The liquid-crystalline epoxy developed in this study was found to exhibit higher thermal conductivity than conventional non-liquid epoxy resin. Table 1 summarizes the thermal conductivities of each epoxy matrix with <i>p</i>-phenylenediamine (PDA).</p>

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	<p data-bbox="525 430 1182 467">https://www.mdpi.com/2073-4360/13/8/1302</p> <p data-bbox="525 836 1348 873">https://www.onsemi.com/pub/Collateral/AND8211-D.PDF</p>

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	<p data-bbox="525 532 1350 570">https://www.onsemi.com/pub/Collateral/AND8211-D.PDF</p> <p data-bbox="525 1044 1278 1081">https://en.wikipedia.org/wiki/Flat_no-leads_package</p> <p data-bbox="525 1382 1528 1419">https://www.panacol.com/adhesive-glue/thermally-conductive-glue#</p>

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	https://industrial.sherwin-williams.com/emeai/gb/en/resin-flooring/resources/flooring-technical-resources/technical-articles/epoxy-hardeners-use.html